

G011
Biphenyl [92-52-4]

Results of Testing

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
Biphenyl	92-52-4	EEATOX Acute fish toxicity (Voluntary test)	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	Rainbow trout	96 hr, static and 192 hr, flow-through	Not reported	Not specified	96-hour static LC ₅₀ > 0.81 mg/L 192-hour flow-through LC ₅₀ = 1.3 (0.81 to 1.5) mg/L Lowest effect concentration (not eating) >0.6 mg/L	52 FR 39560; 10/22/87, OTS0528241
Biphenyl	92-52-4	HEDIRR Permeability coefficient (Kp)	69 FR 22402 OPPT-2003-0006		in vitro			AWAITING DATA	DUE 6/2005
Biphenyl	92-52-4	HEDIRR Dermal absorption	69 FR 22402 OPPT-2003-0006		in vitro	10 minutes		AWAITING DATA	DUE 6/2005
Biphenyl	92-52-4	HEDIRR Dermal absorption	69 FR 22402 OPPT-2003-0006		in vitro	60 minutes		AWAITING DATA	DUE 6/2005
Biphenyl	92-52-4	EEBIOC Mollusk biocon- centration	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	<i>Crassostrea virginica</i> (eastern oyster)	28 d, flow-through, seawater	0.058 ± 0.002 mg/L (mean, measured)	Not specified	Uptake by tissues was rapid; equilibrium was reached at 7 days. The BCF of parent biphenyl at day 28 was 110. The mean tissue concentration was 102 mg/kg total biphenyl equivalents. Less than 1% of C-14 activity was associated with hydroxybiphenyl metabolites.	54 FR 12953; 3/29/89, OTS0528276
Biphenyl	92-52-4	EECLIF Fish early life stage	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	<i>Salmo gairdneri</i> (rainbow trout)	87 days, flow-through	0.063, 0.099, 0.143, 0.229, 0.332, 0.564 mg/L (mean, measured)	Not specified	The no-effect concentration was 0.229 mg/L and lowest- effect concentration was 0.332 mg/L (weight), yielding the maximum acceptable toxicant concentration (MATC) at 0.275 mg/L (geometric mean).	53 FR 17760; 5/18/88, OTS0528268
Biphenyl	92-52-4	EEOTHR Oyster shell deposition test	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	<i>Crassostrea virginica</i> (eastern oyster)	96 hr, flow-through	0.024 to 0.269 mg/L (mean, measured)	Not specified	New shell was not reduced by 50% in any test treatments as compared to controls; EC ₅₀ (shell growth) was therefore >0.269 mg/L.	54 FR 1229; 1/12/89, OTS0528249
Biphenyl	92-52-4	EFBDEG Anaerobic aquatic biodegradation	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	Not applicable	4, 8, and 12 weeks, sewage lagoon sediment. Anaerobic, denitrifying and methanogenic conditions	0.98 mg/L (nominal)	Not applicable	No evidence of significant anaerobic biodegradation was seen under either denitrifying or methanogenic processes. Volatilization was not a significant factor because of limited sparging and the sediment's holding power. Mean C-14 activity in the porous polymer trap of 12-week ecocores was 4.0% of dose.	53 FR 43267; 10/26/88, OTS0528274
Biphenyl	92-52-4	EFBDEG Aerobic aquatic biodegradation	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	Not applicable	Shake-flask, 11 days, river sediment, aerobic	77 µg/L, 1 mg/L	Not applicable	Mineralization to CO ₂ accounted for about 40% of C-14 activity at both concentrations; after 10 days, the mean level of C-14 in the sediment was 9% of test levels.	53 FR 23459; 6/22/88, OTS0528271

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Biphenyl	92-52-4	EFBDEG Aerobic aquatic biodegradation	Non-TSCA Protocol/ Guideline (docket OPTS-42031)	Not applicable	Shake-flask, 10 days, lake sediment/water system, aerated	77 µg/L, 1 mg/L	Not applicable	Mineralization to CO ₂ ranged from 6 to 36% at the high dose, and 32 to 43% at the low dose. Mean mass balance in active microcosms was 88.0%, compared to 77.3% for sterile microcosms. Data indicate biphenyl biodegrades aerobically, and the half-life in lake sediment from Busch Wildlife Reserve was estimated to be 6 to 10 days, compared to 2 to 3 days in Illinois River water.	53 FR 28909; 8/1/88, OTS0528273